



SEQUENCE LISTING

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<120> MONOCLONAL ANTIBODIES TO THE CLFA PROTEIN . . .

<130> P07069US04/BAS

<140> 10/056,052

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<151> 2001-07-30

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<150> 60/274,611

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<150> 60/264,072

<151> 2001-01-26

<160> 29

<170> PatentIn version 3.1

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acgacaacga atcaagctaa tacaccggca acaactcaat caagcaatac aaatgcggag 300

gaattagtga atcaaacaaag taatgaaacg acttttaatg atactaatac agtatcatct 360

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<213> Staphylococcus aureus
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20 25 30

Asn Val Ser Asp Thr Lys Thr Ser Ser Asn Thr Asn Asn Gly Glu Thr
35 40 45

Ser Val Ala Gln Asn Pro Ala Gln Gln Glu Thr Thr Gln Ser Ser Ser
50 55 60

Thr Asn Ala Thr Thr Glu Glu Thr Pro Val Thr Gly Glu Ala Thr Thr
65 70 75 80

Thr Thr Thr Asn Gln Ala Asn Thr Pro Ala Thr Thr Gln Ser Ser Asn
85 90 95

Thr Asn Ala Glu Glu Leu Val Asn Gln Thr Ser Asn Glu Thr Thr Phe
100 105 110

Asn Asp Thr Asn Thr Val Ser Ser Val Asn Ser Pro Gln Asn Ser Thr
115 120 125

Asn Ala Glu Asn Val Ser Thr Thr Gln Asp Thr Ser Thr Glu Ala Thr
130 135 140

Pro Ser Asn Asn Glu Ser Ala Pro Gln Ser Thr Asp Ala Ser Asn Lys
145 150 155 160

Asp Val Val Asn Gln Ala Val Asn Thr Ser Ala Pro Arg Met Arg Ala
165 170 175

Phe Ser Leu Ala Ala Val Ala Ala Asp Ala Pro Ala Ala Gly Thr Asp
180 185 190

Ile Thr Asn Gln Leu Thr Asn Val Thr Val Gly Ile Asp Ser Gly Thr
195 200 205

Thr Val Tyr Pro His Gln Ala Gly Tyr Val Lys Leu Asn Tyr Gly Phe
210 215 220

Ser Val Pro Asn Ser Ala Val Lys Gly Asp Thr Phe Lys Ile Thr Val
225 230 235 240

Pro Lys Glu Leu Asn Leu Asn Gly Val Thr Ser Thr Ala Lys Val Pro
245 250 255

Pro Ile Met Ala Gly Asp Gln Val Leu Ala Asn Gly Val Ile Asp Ser
260 265 270

Asp Gly Asn Val Ile Tyr Thr Phe Thr Asp Tyr Val Asn Thr Lys Asp
275 280 285

Asp Val Lys Ala Thr Leu Thr Met Pro Ala Tyr Ile Asp Pro Glu Asn
290 295 300

Val Lys Lys Thr Gly Asn Val Thr Leu Ala Thr Gly Ile Gly Ser Thr
305 310 315 320

Thr Ala Asn Lys Thr Val Leu Val Asp Tyr Glu Lys Tyr Gly Lys Phe
325 330 335

Tyr Asn Leu Ser Ile Lys Gly Thr Ile Asp Gln Ile Asp Lys Thr Asn
340 345 350

Asn Thr Tyr Arg Gln Thr Ile Tyr Val Asn Pro Ser Gly Asp Asn Val
355 360 365

Ile Ala Pro Val Leu Thr Gly Asn Leu Lys Pro Asn Thr Asp Ser Asn
370 375 380

Ala Leu Ile Asp Gln Gln Asn Thr Ser Ile Lys Val Tyr Lys Val Asp
385 390 395 400

Asn Ala Ala Asp Leu Ser Glu Ser Tyr Phe Val Asn Pro Glu Asn Phe
405 410 415

Glu Asp Val Thr Asn Ser Val Asn Ile Thr Phe Pro Asn Pro Asn Gln
420 425 430

Tyr Lys Val Glu Phe Asn Thr Pro Asp Asp Gln Ile Thr Thr Pro Tyr
435 440 445

Ile Val Val Val Asn Gly His Ile Asp Pro Asn Ser Lys Gly Asp Leu
450 455 460

Ala Leu Arg Ser Thr Leu Tyr Gly Tyr Asn Ser Asn Ile Ile Trp Arg
465 470 475 480

Ser Met Ser Trp Asp Asn Glu Val Ala Phe Asn Asn Gly Ser Gly Ser
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Gly Glu Ile Glu Pro Ile Pro Glu
515 520

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<213> Staphylococcus aureus

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aaagaattaa acttaaattg tgtaacttca actgctaaag tgccaccaat tatggctgga 240
gatcaagtat tggcaaattg tgtaatcgat agtgatggta atgttattta tacatttaca 300
gactatgtaa atactaaaga tgatgtaaaa gcaactttga ccatgcccgc ttatattgac 360
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gcaaacaaaa cagtattagt agattatgaa aaatatggta agttttataa cttatctatt 480
aaaggtacaa ttgaccaaatt cgataaaaaca aataatacgt atcgtcagac aatttatgtc 540
aatccaagtg gagataacgt tattgcgccg gttttaacag gtaattttaa accaaatacg 600
gatagtaatg cattaataga tcagcaaaat acaagtatta aagtatataa agtagataat 660
gcagctgatt tatctgaaag ttactttgtg aatocagaaa actttgagga tgtcactaat 720
agtgtgaata ttacattccc aaatccaaat caatataaag tagagtttaa tacgcctgat 780
gatcaaatta caacaccgta tatagtagtt gttaatggtc atattgatcc gaatagcaaa 840
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<212> PRT
<213> Staphylococcus aureus

<400> 4

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Leu Thr Asn Val Thr Val Gly Ile Asp Ser Gly Thr Thr Val Tyr Pro
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His Gln Ala Gly Tyr Val Lys Leu Asn Tyr Gly Phe Ser Val Pro Asn

35

40

45

Ser Ala Val Lys Gly Asp Thr Phe Lys Ile Thr Val Pro Lys Glu Leu
50 55 60

Asn Leu Asn Gly Val Thr Ser Thr Ala Lys Val Pro Pro Ile Met Ala
65 70 75 80

Gly Asp Gln Val Leu Ala Asn Gly Val Ile Asp Ser Asp Gly Asn Val
85 90 95

Ile Tyr Thr Phe Thr Asp Tyr Val Asn Thr Lys Asp Asp Val Lys Ala
100 105 110

Thr Leu Thr Met Pro Ala Tyr Ile Asp Pro Glu Asn Val Lys Lys Thr
115 120 125

Gly Asn Val Thr Leu Ala Thr Gly Ile Gly Ser Thr Thr Ala Asn Lys
130 135 140

Thr Val Leu Val Asp Tyr Glu Lys Tyr Gly Lys Phe Tyr Asn Leu Ser
145 150 155 160

Ile Lys Gly Thr Ile Asp Gln Ile Asp Lys Thr Asn Asn Thr Tyr Arg
165 170 175

Gln Thr Ile Tyr Val Asn Pro Ser Gly Asp Asn Val Ile Ala Pro Val
180 185 190

Leu Thr Gly Asn Leu Lys Pro Asn Thr Asp Ser Asn Ala Leu Ile Asp
195 200 205

Gln Gln Asn Thr Ser Ile Lys Val Tyr Lys Val Asp Asn Ala Ala Asp
210 215 220

Leu Ser Glu Ser Tyr Phe Val Asn Pro Glu Asn Phe Glu Asp Val Thr
225 230 235 240

Asn Ser Val Asn Ile Thr Phe Pro Asn Pro Asn Gln Tyr Lys Val Glu
245 250 255

Phe Asn Thr Pro Asp Asp Gln Ile Thr Thr Pro Tyr Ile Val Val Val
260 265 270

Asn Gly His Ile Asp Pro Asn Ser Lys Gly Asp Leu Ala Leu Arg Ser
 275 280 285

Thr Leu Tyr Gly Tyr Asn Ser Asn Ile Ile Trp Arg Ser Met Ser Trp
 290 295 300

Asp Asn Glu Val Ala Phe Asn Asn Gly Ser Gly Ser Gly Asp Gly Ile
 305 310 315 320

Asp Lys Pro Val Val Pro Glu Gln Pro Asp Glu
 325 330

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 gaatctggtg tccctgatcg cttcacaggc agtggatctg ggacagattt tactcttacc 240
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<210> 6
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 <212> PRT
 <213> Staphylococcus aureus

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Asn Ile Met Met Thr Gln Ser Pro Ser Ser Leu Ala Val Ser Ala Gly
 1 5 10 15

Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
 20 25 30

Ser Asn Gln Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
 35 40 45

Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val

50

55

60

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Asn Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys His Gln
85 90 95

Tyr Leu Ser Ser His Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 7

<211> 354

<212> DNA

<213> Staphylococcus aureus

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ccaggaaagg gtctggagtg gctgggaatg atatggggtg gtgaaaacac agactataat 180

tcagctctca aatccagact gagcatcagc aaggacaact ccaagagcca agttttctta 240

aaaatgaaca gtctgcaaac tgatgacaca gccatgtact actgtgccag cgcctactat 300

ggtaactcct ggtttgctta ctggggccag gggactctgg tcaactgtctc tgca 354

<210> 8

<211> 118

<212> PRT

<213> Staphylococcus aureus

<400> 8

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Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Arg Tyr
20 25 30

Asn Ile His Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Met Ile Trp Gly Gly Glu Asn Thr Asp Tyr Asn Ser Ala Leu Lys
50 55 60

Ser Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Ser Gln Val Phe Leu
65 70 75 80

Lys Met Asn Ser Leu Gln Thr Asp Asp Thr Ala Met Tyr Tyr Cys Ala
85 90 95

Ser Ala Tyr Tyr Gly Asn Ser Trp Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ala
115

<210> 9
<211> 336
<212> DNA
<213> Staphylococcus aureus

<400> 9
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tggtaccagc agaaaccagg gcagtctcct aaactgctga tctactgggc atccactagg 180
gaatctggtg tccctgatcg cttcacaggc agtggatctg ggacagattt tactcttacc 240
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tacacgttcg gagggggggac caagctggaa ataaaa 336

<210> 10
<211> 112
<212> PRT
<213> Staphylococcus aureus

<400> 10

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Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
20 25 30

Ser Asn Gln Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45

Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys His Gln
85 90 95

Tyr Leu Ser Ser Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 11
<211> 363
<212> DNA
<213> Staphylococcus aureus

<400> 11
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gca 363

<210> 12
<211> 121
<212> PRT
<213> Staphylococcus aureus

<400> 12
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Ser Leu Ser Ile Thr Cys Ala Ile Ser Gly Phe Ser Leu Ser Arg Tyr
20 25 30

Ser Val His Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Met Ile Trp Gly Gly Gly Asn Thr Asp Tyr Asn Ser Ala Leu Lys

50

55

60

Ser Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Ser Gln Val Phe Leu
65 70 75 80

Lys Met Asn Ser Leu Gln Thr Asp Asp Thr Ala Met Tyr Tyr Cys Ala
85 90 95

Arg Lys Gly Glu Phe Tyr Tyr Gly Tyr Asp Gly Phe Val Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ala
115 120

<210> 13
<211> 336
<212> DNA
<213> Staphylococcus aureus

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gaatctgggtg tccctgatcg cttcacaggc agtggatctg ggacagattt tactcttacc 240
atcagcagtg tacaagctga agacctggca gtttattact gtcataata cctctcctcg 300
tacacgttcg gagggggggac caagctggaa ataaaa 336

<210> 14
<211> 112
<212> PRT
<213> Staphylococcus aureus

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Asn Ile Met Met Thr Gln Ser Pro Ser Ser Leu Ala Val Ser Ala Gly
1 5 10 15

Glu Lys Val Thr Met Ser Cys Arg Ser Ser Gln Ser Val Leu Tyr Ser
20 25 30

Ser Asn Gln Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45

Ser Pro Thr Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
 50 55 60

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
 65 70 75 80

Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys His Gln
 85 90 95

Tyr Leu Ser Ser Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 15
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 <212> DNA
 <213> Staphylococcus aureus

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 aaaatgaaca gtctgcaaac tgatgacaca gccatgtact actgtgccac cgctactat 300
 ggtaactcct ggtttgctta ctggggccaa gggactctgg tcaactgtctc tgca 354

<210> 16
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 <212> PRT
 <213> Staphylococcus aureus

<400> 16

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Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Arg Tyr
 20 25 30

Ser Val His Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu
 35 40 45

Gly Met Ile Trp Gly Gly Gly Asn Thr Asp Tyr Asn Ser Ala Leu Lys
 50 55 60

Ser Arg Leu Ser Ile Thr Lys Asp Asn Ser Lys Ser Gln Val Phe Leu
65 70 75 80

Lys Met Asn Ser Leu Gln Thr Asp Asp Thr Ala Met Tyr Tyr Cys Ala
85 90 95

Thr Ala Tyr Tyr Gly Asn Ser Trp Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ala
115

<210> 17
<211> 336
<212> DNA
<213> Staphylococcus aureus

<400> 17
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tggtaccagc agaaaccagg gcagtctcct aaactgctga tctactgggc atccactagg 180
gaatctggtg tccctgatcg cttcagcggc agtggatctg ggacagattt tactcttacc 240
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tacacgttcg gaggggggac caagctggaa ataaaa 336

<210> 18
<211> 112
<212> PRT
<213> Staphylococcus aureus

<400> 18

Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1 5 10 15

Glu Arg Val Thr Met Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
20 25 30

Ser Asn Gln Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45

Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys His Gln
85 90 95

Tyr Leu Ser Ser Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 19
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<212> DNA
<213> Staphylococcus aureus

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<210> 20
<211> 121
<212> PRT
<213> Staphylococcus aureus

<400> 20

Gln Val Gln Leu Lys Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Ile Thr Cys Thr Ile Ser Gly Phe Ser Leu Ser Arg Tyr
20 25 30

Ser Val His Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Met Ile Trp Gly Gly Gly Asn Thr Asp Tyr Asn Ser Ala Leu Lys
50 55 60

Ser Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Asn Gln Val Phe Leu
65 70 75 80

Lys Met Asn Ser Leu Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Lys Gly Glu Phe Tyr Tyr Gly Tyr Asp Gly Phe Val Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 21
<211> 336
<212> DNA
<213> Staphylococcus aureus

<400> 21
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tggtaccagc agaaaccagg gcagtctcct aaactgctga tctactgggc atccactagg 180
gaatctgggtg tccctgatcg cttcacaggc agtggatctg ggacagattt tactcttacc 240
atcagcagtg tacaagctga agacctggca gtttattgct gtcatcaata cctctcctcg 300
tacacgttcg gagggggggac cgagctggaa ataaaa 336

<210> 22
<211> 112
<212> PRT
<213> Staphylococcus aureus

<400> 22

Asn Ile Met Met Thr Gln Ser Pro Ser Ser Leu Ala Val Ser Ala Gly
1 5 10 15

Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
20 25 30

Ser Asn Gln Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45

Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Cys Cys His Gln
85 90 95

Tyr Leu Ser Ser Tyr Thr Phe Gly Gly Gly Thr Glu Leu Glu Ile Lys
100 105 110

<210> 23
<211> 345
<212> DNA
<213> Staphylococcus aureus

<400> 23
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<210> 24
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<212> PRT
<213> Staphylococcus aureus

<400> 24

Gln Val Gln Leu Lys Glu Ser Gly Pro Gly Leu Val Ala Pro Ser Gln
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Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Arg Tyr
20 25 30

Ser Val His Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Met Ile Trp Gly Gly Gly Ser Thr Asp Tyr Asn Ser Ala Leu Lys
50 55 60

Ser Arg Leu Asn Ile Ser Lys Asp Asn Ser Lys Ser Gln Val Phe Leu

65

70

75

80

Lys Met Asn Ser Leu Gln Thr Asp Asp Thr Ala Met Tyr Tyr Cys Ala
85 90 95

Arg Arg Leu Trp Tyr Phe Asp Val Trp Gly Ala Gly Thr Thr Val Thr
100 105 110

Val Ser Ser
115

<210> 25
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<213> Staphylococcus aureus

<400> 25

Arg Tyr Ser Val His
1 5

<210> 26
<211> 16
<212> PRT
<213> Staphylococcus aureus

<400> 26

Met Ile Trp Gly Gly Gly Asn Thr Asp Tyr Asn Ser Ala Leu Lys Ser
1 5 10 15

<210> 27
<211> 17
<212> PRT
<213> Staphylococcus aureus

<400> 27

Lys Ser Ser Gln Ser Val Leu Tyr Ser Ser Asn Gln Lys Asn Tyr Leu
1 5 10 15

Ala

<210> 28
<211> 7
<212> PRT
<213> Staphylococcus aureus

<400> 28

Trp Ala Ser Thr Arg Glu Ser
1 5

<210> 29

<211> 8

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